Write a program for matrix addition?

CODE:

import java.util.Scanner;

public class matrixAddition {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter the number of rows and columns for the matrices:");

int rows = scanner.nextInt();

int columns = scanner.nextInt();

int[][] mat1 = new int[rows][columns];

int[][] mat2 = new int[rows][columns];

System.out.println("Enter elements of the first matrix:");

inputMatrix(scanner, mat1);

System.out.println("Enter elements of the second matrix:");

inputMatrix(scanner, mat2);

int[][] matSum = addMatrices(mat1, mat2);

System.out.println("Matrix Sum:");

displayMatrix(matSum);

}

public static void inputMatrix(Scanner scanner, int[][] matrix) {

for (int i = 0; i < matrix.length; i++) {

for (int j = 0; j < matrix[0].length; j++) {

matrix[i][j] = scanner.nextInt();

}

}

}

public static int[][] addMatrices(int[][] mat1, int[][] mat2) {

int rows = mat1.length;

int columns = mat1[0].length;

int[][] matSum = new int[rows][columns];

for (int i = 0; i < rows; i++) {

for (int j = 0; j < columns; j++) {

matSum[i][j] = mat1[i][j] + mat2[i][j];

}

}

return matSum;

}

public static void displayMatrix(int[][] matrix) {

for (int[] row : matrix) {

for (int element : row) {

System.out.print(element + " ");

}

System.out.println();

}

}

}

OUTPUT:

C:\javap>javac matrixAddition.java

C:\javap>java matrixAddition

Enter the number of rows and columns for the matrices:

3

3

Enter elements of the first matrix:

1 2 3 4 5 6 7 8 9

Enter elements of the second matrix:

1 2 3 4 5 6 7 8 9

Matrix Sum:

2 4 6

8 10 12

14 16 18

